

CLAIMS

1. An apparatus for sensing faults of application programs in a CDMA system, the apparatus comprising:
  - 5 a shared memory comprising a plurality of fields, wherein each of the fields comprises a Heart Beat;
    - 10 a plurality of application programs corresponding to the plurality of fields in the shared memory on a one-to-one basis, each of which accesses to the corresponding field and increments the corresponding Heart Beat by 1 when a certain period (p1) elapses; and
      - 15 an operation and management processing unit which detects values of the Heart beats of the plurality of fields in the shared memory when other certain period (p2) elapses, if all of the values of the Heart Beats equals to "1," then the operation and management processing unit initializes the values to "0" and performs normal operation, and if any of the values of the Heart Beats equals to "0," then the operation and management processing unit recognizes a fault of an application program connected to the field, the value of Heart Beat which is "0," and issues an alarm.
  - 20 2. The apparatus according to Claim 1, wherein the reading period (p2) of the Heart beat of the operation and management processing unit is set up to more than the attaching period (p1) of the Heart beat of the application program.
  - 25 3. A method for sensing faults of a plurality of application programs in a CDMA system, each of the application programs performing a characteristic operation, the method comprising:
    - 30 a first step wherein an operation and management processing unit generates a shared memory, the shared memory comprising a plurality of fields, wherein each of the fields comprises a Heart Beat, and wherein the plurality of fields correspond to the plurality of application programs on a one-to-one basis;
    - 35 a second step wherein the operation and management processing unit detects whether the present time is a reading period (p2) of the Heart Beat;
    - 40 a third step wherein if the present time is not the reading period (p2) of the Heart Beat, then the second step is performed again, and if the present time is the reading period (p2) of the Heart Beat, then the operation and management processing unit reads all of the values of the Heart Beat in the plurality of fields of the shared memory;

a fourth step wherein the operation and management processing unit determines whether any of values of Heart Beats in the plurality of the fields equals to "0";

5 a fifth step wherein if there is no field, the value of Heart Beat which equals to "0", i.e. the values of Heart Beats in all fields equal to "1", then the operation and management processing unit initializes all values of Heart Beats to "0" and the second step is performed again;

10 a sixth step wherein if there is a field, the value of Heart Beat which equals to "0", among the plurality of fields, then the operation and management processing unit detects a fault of application program corresponding to the field and issues an alarm; and

a seventh step wherein the second step is performed again after the operation and management processing unit initializes all values of the fields except the field in which the fault is detected.